

Appln No. 09/747,677
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Reply to Office action of January 30, 2006

REMARKS/ARGUMENTS

Claims 90-121 were pending in this application when last examined by the Examiner. Claim 114 has been amended. Claims 122-123 have been added. The amendments find support in the original specification, claims, and drawings. No new matter has been added. In view of the above amendments and remarks that follow, reconsideration and an early indication of allowance of the now pending claims 90-123 are respectfully requested.

Claims 90-93, 95-101, 103 -109, 111-117, and 119-121 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. 2001/0023436 (Srinivasan) in view of U.S. Patent No. 6,006,265 (Rangan). Applicant respectfully traverses this rejection.

Independent claims 90 and 106 require that the object data that is associated with the video object and ultimately encoded into a television broadcast signal include both the recited "indicia" and the recited "identifier." The recited "indicia" is "indicative that the video object is linked to one of the plurality of multiplexed program streams." The recited "identifier" is "for a particular one of the plurality of multiplexed program streams." Also encoded into the television broadcast signal is "a mask including graphics data for overlaying a graphics image on a video frame." Nothing in Srinivasan teaches or suggests the encoding of all of the recited "mask," "indicia," and "identifier," into the television broadcast signal.

Srinivasan discloses an authoring station tracking an image entity in a video in order to render it identifiable and interaction-capable to an end user. (par. 0042). The user may interact with the tracked entity to access advertisements and other data which may be associated with the tracked entity. (par. 0044, 0081). Nothing in Srinivasan teaches or suggests, however, the encoding of an "indicia" separate from a "mask" which is "indicative that the video object is linked to one of the plurality of multiplexed program streams."

Srinivasan also fails to teach or suggest an "identifier for a particular one of the plurality of multiplexed program streams." There is nothing in paragraphs 0018 and 0085 relied on by the Examiner that teaches or suggests this limitation. Paragraph 0018 discloses that "[t]he

multiplexer in some cases receives multiple video streams as well as the authorized metadata." Paragraph 0085 discloses various types of annotations that may be added to an image entity appearing on one of these video streams. However, there is nothing in either paragraph that teaches or suggests a user's ability to switch from one video stream to another, and much less, that the video streams are identified by the recited "identifier" for "switching from presenting a current multiplexed program stream to presenting the particular one of the plurality of multiplexed program streams."

Independent claims 90 and 106 further require that a "receiver" which receives "the television broadcast signal and the plurality of multiplexed program streams" be "capable of retrieving and overlaying the graphics images on the video frame, receiving viewer actuation of the overlaid graphics images, and in response to the viewer actuation, reviewing the indicia in the object data for determining whether the associated video object is linked to one of the plurality of multiplexed program streams, and in response to a determination that the video object is linked to one of the plurality of multiplexed program streams, retrieving from the object data the identifier of the particular one of the plurality of multiplexed program streams, and switching from presenting a current multiplexed program stream to presenting the particular one of the plurality of multiplexed program streams." The Examiner acknowledges that Srinivasan does not teach or suggest this limitation. However, he relies on Rangan to make up for this deficiency.

Rangan is directed to a digital network where users connected to the network receive streaming digital hypervideo with embedded hyperlinks from a hypervideo server. (See, Abstract). Although Rangan discloses that a subscriber/user/viewer (SUV) may click on a hotspot displayed on the hypervideo to view another video, nothing in Rangan teaches or suggests that such video is one of the "multiplexed program streams" transmitted by a transmitter along with the television broadcast signal as is required by claims 90 and 106. Instead, Rangan's system resolves a hyperlink to a particular video, and transmits that particular video only to the client SUV. (FIG. 3d; Col. 26, lines 22-26). Thus, nothing in Rangan teaches the "switching

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from presenting a current multiplexed program stream to presenting the particular one of the plurality of multiplexed program streams."

Furthermore, in Rangan's system, when a SUV clicks on a particular hyperlink, the client SUV provides the click information to a special server for interpretation by the special server. (Col. 9, lines 1-21). It is this special server that then determines the particular content to be displayed by the client SUV. (Col. 10, line 65 - Col. 11, 19). That is, "[i]nstead of leading directly to the ultimate network site, or network resource, that will (ultimately) be accessed by the client SUV if he/she 'clicks through' on [a] hyperlink, the hyperlink instead points to a particular portal of the special server." (Col. 10, lines 48-54). The special server then determines which content to display based on factors such as the SUV that selected the hyperlink, the financial background of the exercising SUV, the previously-expressed preferences of the SUV, the time of day, week, month or year, the proximate exercise of the same or of related hyperlinks by other SUVs, and other factors. (Col. 9, lines 1-21). Thus, the client SUV is merely a dumb terminal which transmits click information and displays content determined by the special server. All the intelligence for resolving the click information to appropriate content is done by the special server.

In marked contrast, the hyperlinked broadcast system of claims 90 and 106 require the same receiver "retrieving and overlaying the graphics image" and "receiving viewer actuation of the overlaid graphics image" be intelligent enough to also actually engage in "reviewing the indicia in the object data for determining whether the associated video is linked to one of the plurality of multiplexed program streams, and in response to a determination that the video object is linked to one of the plurality of multiplexed program streams, retrieving from the object data the identifier of the particular one of the plurality of multiplexed program streams, and switching from presenting a current multiplexed program stream to presenting the particular one of the plurality of multiplexed program streams." Thus, it is the receiver, and not a special server like taught in Rangan, that controls the display upon actuation of an overlaid graphics images.

Furthermore, Rangan's system does not, "in response to the viewer actuation" of a hyperlink, first "review[]" the indicia in the object data for determining whether the associated

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video object is linked to one of the plurality of multiplexed video streams," and "in response to a determination that the video object is linked to one of the plurality of multiplexed program streams, retriev[e] . . . the identifier of the particular one of the plurality of multiplexed program streams, and switch[] from presenting a current multiplexed program stream to presenting the particular one of the plurality of multiplexed program streams." There is nothing in Rangan that teaches or suggests that it cares about the type of content (video or otherwise) that will be ultimately displayed at the client SUV. This is because Rangan's system acts in the same manner for all types of content. Accordingly, claims 90 and 106 are now in condition for allowance.

Claim 98 recites a "hyperlinked video reception system . . . comprising a processor retrieving and overlaying the graphics image on the video frame, receiving viewer actuation of the overlaid graphics image, and in response to the viewer actuation, reviewing the indicia in the object data for determining whether the associated video object is linked to one of the plurality of multiplexed program streams, and in response to a determination that the video object is linked to one of the plurality of multiplexed program streams, retrieving from the object data the identifier of the particular one of the plurality of multiplexed program streams, and switching from presenting a current multiplexed program stream to presenting the particular one of the plurality of multiplexed program streams." Claim 114 has been amended to include a similar hyperlinked video reception system. As discussed above with respect to claims 90 and 106, it is Rangan's special server, and not the client SUV, that resolves a hyperlink selection to a particular content. Accordingly, claims 98 and 114 are now in condition for allowance.

Claims 91-93, 95-97, 99-101, 103-105, 107-109, 111-113, 115-117, and 119-121 are also in condition for allowance because they depend on an allowable base claim, and for the additional limitations that they contain.

Claims 94, 102, 110, and 118 are rejected under 35 U.S.C. 103(a) as being unpatentable over Srinivasan and Rangan, in view of U.S. Patent No. 6,452,598 (Rafey). Applicant respectfully traverses this rejection.

Claims 94, 102, 110, and 118 recite "determining whether the video object is visible in the video frame and, responsive to a determination that the video object is visible in the video

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frame, overlaying the graphics image on the video frame." The Examiner contends that Rafey teaches this limitation.

Rafey discloses a system which enables video from a live broadcast to appear in an animated 3-D scene associated with the video content. (Col. 6, lines 62-66). Rafey discloses that this may be achieved by mapping video texture onto the 3-D scene. The video texture may be both plain video or a "shaped video." (Col. 7, lines 44-45). "Shaped video" allows special effects to be generated within a 3-D graphics scene. (Col. 10, lines 43-46). For example, "special effect signals (e.g., special effect media streams) are transmitted to provide shaped video footage (e.g, falling leaves, snow) . . . In another embodiment, shaped video is used to introduce characters as video in a 'virtual set' (e.g., video footage of narrators being inserted into a 3-D scene) that is controlled by the viewer." (Col. 16, lines 2-16).

Rafey's generation of shaped video has nothing to do with overlaying a graphics image on a video frame for allowing a user to interact with the graphics image. Thus, a person of skill in the art considering Rafey in combination with Srinivasan and Rangan would have no suggestion or motivation to apply Rafey's teachings for the purpose of having a receiver determine whether or not a graphics image with which one may interact should be overlaid on a video frame or not.

Even if the combination of Rafey with Srinivasan and Rangan were proper, Rafey's disclosure of "shaped video" at most teaches that certain regions of a video footage may be made visible whereas other regions may not, all in the context of texture mapping for a 3-D scene. There is nothing in Rafey, however, that teaches or suggests overlaying any "graphics image on a video frame" as is required by claims 1 and 15. Contrary to that, Rafey overlays videos onto a 3-D scene. Thus, even the combination of Srinivasan, Rangan, and Rafey fail to teach or suggest the limitations of claims 94, 102, 110, and 118. Accordingly, claims 94, 102, 110, and 118 are now in condition for allowance.

Claims 122-123 are new in this application. Claims 122-123 are also in condition for allowance because they depend on an allowable base claim, and for the additional limitations that they contain. Specifically, claim 122 adds the limitation that "the particular one of the

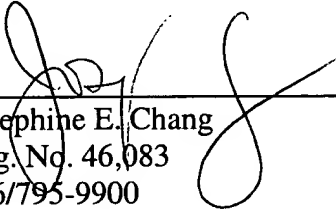
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plurality of multiplexed program streams displayed upon the user actuation of the overlaid graphics image is the same for each user receiving the plurality of multiplexed program streams and actuating the overlaid graphics image." (Emphasis added). Although Rangan discloses that a user may click on a hotspot on a video to view another video, the video displayed for one user may be different from the video displayed to another user. This is because Rangan's system "permits responses to any 'click-through(s)' made on any hypervideo link(s) by each and every separate SUV [to] be fully customized." (Col. 10, lines 15-18). Accordingly, claim 122 is also in condition for allowance for this additional limitation.

Claim 123 adds the limitation that "the indicia is a link type indicating a video link, the identifier identifies a program mapping table, and the receiver extracts from the program mapping table identifiers of video and audio streams associated with the particular one of the plurality of multiplexed program streams." There is nothing in Srinivasan and Rangan that teaches or suggests these additional limitations. Accordingly, claim 123 is also in condition for allowance for these additional limitations.

In view of the above amendments and remarks, Applicant respectfully requests reconsideration and an early indication of allowance of the now pending claims 90-123.

Respectfully submitted,
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